

ABSTRACT

It is intended to efficiently remove particulate substances, such as NOx and soot, without poisoning by Sox, etc. from dilute-combustion effecting internal combustion engines, combustion equipment, etc. There is provided an exhaust gas purifier to be installed in exhaust passage (2) of internal combustion engine (1) or the like, comprising, disposed in the exhaust passage (2), NOx adsorbent (4) capable of temporarily adsorbing nitrogen oxides even in an atmosphere of excess air and capable of desorbing the adsorbed nitrogen oxides upon temperature rise or in a reducing atmosphere, adsorbed substance desorbing means (3) arranged on an exhaust upstream side as compared with the NOx adsorbent (4) and capable of heating the exhaust or converting it to a reducing atmosphere, and combustion device (5) arranged on an exhaust downstream side as compared with the NOx adsorbent (4) and composed of fuel nozzle (6) and igniter (7). In normal operation, the NOx adsorbent (4) adsorbs NOx contained in exhaust gas. When the amount of NOx adsorbed increases to saturation, the adsorbed substance desorbing means (3) and the combustion device (5) are operated to thereby desorb the NOx, which is burned off in combustion over-rich combustion region (X1) of the combustion device (5).